

## WHAT IS CLAIMED IS:

1       1. A self-contained, portable music player comprising:  
2            a rechargeable battery pack for powering the music  
3 player;  
4            an input/output device including at least a keypad for  
5 receiving user inputs and a display;  
6            a memory capable of storing digital music in at least one  
7 compressed digital format;  
8            a data processor connected to said input/output device  
9 and said memory, said data processor programmed to decompress  
10 said digital music into uncompressed digital music samples;  
11          an audio coder-decoder connected to said connected to  
12 said data processor for receiving said uncompressed digital  
13 music samples from said data processor and converting said  
14 uncompressed digital music samples into analog music;  
15          a headset connector connected to said audio coder-decoder  
16 for supplying said analog music to an external headset  
17 earphone; and  
18          a base connector including  
19            a power connection connected to said rechargeable  
20 battery pack capable of receiving charging power from an  
21 external base unit, and  
22          an analog output connection connected to said audio  
23 coder-decoder for supplying said analog music to an  
24 external base unit for amplification and reproduction via  
25 speakers;  
26          wherein the self-contained, portable music player  
27 operates in

28               a portable mode disconnected from a base unit and  
29               powered by said rechargeable battery pack, wherein a user  
30               may listen to selected digital music stored in said  
31               memory via an external headset earphone, and

32               in a base mode connected to a base unit via said  
33               base connector and powered via said power connector,  
34               wherein a user may listen to selected digital music  
35               stored in said memory via speakers of an external base  
36               unit.

1               2. The self-contained, portable music player of claim 1,  
2               wherein:

3               said data processor is further programmed in cooperation  
4               with input/output device said whereby a user may enter volume  
5               control data via said keypad; and

6               said base connector further includes a volume data  
7               connection for transmission of volume control data from the  
8               self-contained, portable music player to an external base  
9               unit.

1               3. The self-contained, portable music player of claim 1,  
2               wherein:

3               said base connector further includes a set of digital  
4               connections connected to said data processor and said audio  
5               coder-decoder for bi-directional transmission of digital data  
6               with an external base unit.

1       4. The self-contained, portable music player of claim 1,  
2 further comprising:

3           an infrared transmission interface connected to said data  
4 processor for bi-directional transmission of digital data with  
5 an external base unit.

1       5. The self-contained, portable music player of claim 1,  
2 further comprising:

3           a microphone;  
4           a pre-amplifier having an input connected to said  
5 microphone and an output connected to said audio coder-  
6 decoder;

7           wherein said audio coder-decoder digitizes sound received  
8 by said microphone, said data processor programmed to store  
9 said digitized sounds in said memory.

1       6. The self-contained, portable music player of claim 5,  
2 wherein:

3           said data processor is further programmed to compress  
4 said digitized sounds into a compressed digital format and  
5 store said compressed digital format in said memory.

1       7. The self-contained, portable music player of claim 5,  
2 wherein:

3           said data processor is further programmed to  
4           recall digitized sounds stored in said memory, and  
5           compress said recalled digitized sounds into a  
6           compressed digital format and store said compressed  
7           digital format in said memory.

1       8. The self-contained, portable music player of claim 1,  
2 wherein:

3           said base connector further includes an analog input  
4 connection connected to said audio coder-decoder for receiving  
5 an analog input from an external base unit; and

6           wherein said audio coder-decoder digitizes analog input  
7 received via said analog input connection, said data processor  
8 programmed to store said digitized analog input in said  
9 memory.

1       9. The self-contained, portable music player of claim 8,  
2 wherein:

3           said data processor is further programmed to compress  
4 said digitized analog input into a compressed digital format  
5 and store said compressed digital format in said memory.

1       10. The self-contained, portable music player of claim  
2 8, wherein:

3           said data processor is further programmed to  
4           recall digitized analog input stored in said  
5 memory, and

6           compress said recalled digitized analog input into  
7 a compressed digital format and store said compressed  
8 digital format in said memory.

1       11. The self-contained, portable music player of claim  
2 1, wherein:

3           said memory is a non-volatile memory capable of retaining  
4 data in the absence of electric power.

1       12. The self-contained, portable music player of claim  
2 1, wherein:

3           said data processor is a digital signal processor.

1       13. A music system comprising:

2           a self-contained, portable music player including  
3            a rechargeable battery pack for powering the music  
4           player,

5           an input/output device including at least a keypad  
6           for receiving user inputs and a display;

7           a memory capable of storing digital music in at  
8           least one compressed digital format,

9           a data processor connected to said input/output  
10          device and said memory, said data processor programmed to  
11          decompress said digital music into uncompressed digital  
12          music samples,

13          an audio coder-decoder connected to said connected  
14          to said data processor for receiving said uncompressed  
15          digital music samples from said data processor and  
16          converting said uncompressed digital music samples into  
17          analog music,

18          a headset connector connected to said audio coder-  
19          decoder for supplying said analog music to an external  
20          headset earphone, and

21           a first base connector including

22            a first power connection connected to said  
23            rechargeable battery pack capable of receiving  
24            charging power from an external base unit, and

25                   a player analog output connection connected to  
26                   said audio coder-decoder for supplying said analog  
27                   music; and  
28                   a base unit including  
29                    a second base connector including  
30                      a second power connection for connection to  
31                    said first power connection,  
32                    an analog input connection for connection to  
33                    said analog output connection,  
34                    a power source connected to said second power  
35                   connection for supplying recharging power for said  
36                   rechargeable battery pack;  
37                    a pre-amplifier having an input connected to said  
38                   analog input connection and an output,  
39                    a power amplifier having an input connected to said  
40                   output of said pre-amplifier and an output, and  
41                    a speaker system connected to said output of said  
42                   power amplifier for reproducing sound corresponding to  
43                   said output of said power amplifier,  
44                   wherein the music system operates in  
45                    a portable mode wherein said self-contained,  
46                   portable music player is disconnected from said base unit  
47                   and powered by said rechargeable battery pack, wherein a  
48                   user may listen to selected digital music stored in said  
49                   memory via an external headset earphone, and  
50                    in a base mode wherein said self-contained,  
51                   portable music player is connected to said base unit via  
52                   said first base connector and said second base connector  
53                   and powered from said power source, wherein a user may

54       listen to selected digital music stored in said memory  
55       via speakers of an external base unit.

1       14. The music system of claim 13, wherein:  
2            said data processor is further programmed in cooperation  
3       with input/output device said whereby a user may enter volume  
4       control data via said keypad;  
5            said first base connector further includes a volume data  
6       output connection for transmission of volume control data from  
7       the self-contained, portable music player;  
8            said second base connector further includes a volume data  
9       input connection for connection to said volume data output  
10      connection; and  
11          said pre-amplifier is further connected to said volume  
12       data input connection and producing an amount of amplification  
13       corresponding thereto.

1       15. The music system of claim 13, wherein:  
2            said first base connector further includes a set of first  
3       digital connections connected to said data processor and said  
4       audio coder-decoder for bi-directional transmission of digital  
5       data with an external base unit;  
6            said second base connector further includes a set of  
7       second digital connections for connection to said set of first  
8       digital connections; and  
9            said base unit further includes a disc drive connected to  
10      said set of second digital connections of said second base  
11      connector capable of storing and recalling digital data.

1       16. The music system of claim 13, further comprising:  
2           an infrared transmission interface connected to said data  
3 processor for bi-directional transmission of digital data with  
4 an external base unit.

1       17. The music system of claim 1, further comprising:  
2           a microphone;  
3           a pre-amplifier having an input connected to said  
4 microphone and an output connected to said audio coder-  
5 decoder;  
6           wherein said audio coder-decoder digitizes sound received  
7 by said microphone, said data processor programmed to store  
8 said digitized sounds in said memory.

1       18. The music system of claim 17, wherein:  
2           said data processor is further programmed to compress  
3 said digitized sounds into a compressed digital format and  
4 store said compressed digital format in said memory.

1       19. The music system of claim 17, wherein:  
2           said data processor is further programmed to  
3           recall digitized sounds stored in said memory, and  
4           compress said recalled digitized sounds into a  
5 compressed digital format and store said compressed  
6 digital format in said memory.

1       20. The music system of claim 13, wherein:  
2           said base unit further includes a tuner for receiving and  
3 demodulating analog audio signals;

4        said first base connector further includes a base unit  
5        analog output connection

6        said first base connector further includes a player  
7        analog input connection connected to said audio coder-decoder  
8        for receiving an analog input from said base unit;

9            wherein said audio coder-decoder digitizes analog input  
10      received via said player analog input connection, said data  
11      processor programmed to store said digitized analog input in  
12      said memory.

1        21. The music system of claim 20, wherein:  
2        said data processor is further programmed to compress  
3        said digitized analog input into a compressed digital format  
4        and store said compressed digital format in said memory.

1        22. The music system of claim 20, wherein:  
2        said data processor is further programmed to  
3            recall digitized analog input stored in said  
4            memory, and  
5            compress said recalled digitized analog input into  
6            a compressed digital format and store said compressed  
7            digital format in said memory.

1        23. The music system of claim 13, wherein:  
2        said memory is a non-volatile memory capable of retaining  
3        data in the absence of electric power.

1        24. The music system of claim 13, wherein:  
2        said data processor is a digital signal processor.

1       25. A base unit for use with a self-contained, portable  
2 music player comprising:  
3            a base connector including  
4              a power connection,  
5              an analog input connection for receiving an analog  
6              input;  
7            a power source connected to said power connection for  
8 supplying recharging power for the self-contained, portable  
9 music player;  
10          a pre-amplifier having an input connected to said analog  
11 input connection and an output,  
12          a power amplifier having an input connected to said  
13 output of said pre-amplifier and an output, and  
14          a speaker system connected to said output of said power  
15 amplifier for reproducing sound corresponding to said output  
16 of said power amplifier.

1       26. The base unit of claim 25, wherein:  
2            said base connector further includes a volume data input  
3 connection for receiving of volume control data from the  
4 self-contained, portable music player;  
5            said pre-amplifier is further connected to said volume  
6 data input connection and producing an amount of amplification  
7 corresponding thereto.

1       27. The base unit of claim 25, wherein:  
2            said base connector further includes a set of digital  
3 connections for connection to a set of digital connections of  
4 the self-contained, portable music player; and

5        said base unit further includes a disc drive connected to  
6    said digital connections of said base connector capable of  
7    storing and recalling digital data.

1        28. The music system of claim 26, further comprising:  
2            a tuner for receiving and demodulating analog audio  
3    signals;  
4        said base connector further includes a base unit analog  
5    output connection connected to output said analog audio  
6    signals.